

Test: Energy Transfer in a Food Chain

Part A: True or False

Directions: Write **T** or **F**

1. ___ Producers obtain their energy directly from the Sun.
 2. ___ Energy increases as it moves up a food chain.
 3. ___ Consumers must obtain energy by eating other organisms.
 4. ___ Decomposers help recycle nutrients back into the ecosystem.
 5. ___ A food chain shows the movement of energy through organisms.
 6. ___ Plants are considered primary consumers.
 7. ___ Most energy is lost as heat at each trophic level.
 8. ___ Herbivores eat producers.
 9. ___ Energy is recycled in ecosystems over and over again.
 10. ___ The Sun is the main source of energy for most food chains.
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Part B: Multiple Choice: Directions: Circle the best answer.

11. What is the original source of energy for most food chains?
 - A. Water
 - B. Soil
 - C. The Sun
 - D. Air
12. Which organism is a producer?
 - A. Rabbit
 - B. Grass
 - C. Hawk
 - D. Snake
13. What is a primary consumer?
 - A. An organism that eats producers
 - B. An organism that makes its own food
 - C. An organism that eats other consumers
 - D. An organism that breaks down dead matter

14. Which of the following is a secondary consumer?
- A. Grass
 - B. Deer
 - C. Frog
 - D. Tree
15. Why does less energy reach higher levels of a food chain?
- A. Energy is destroyed.
 - B. Organisms use energy for life processes.
 - C. Producers take all the energy.
 - D. Consumers do not need energy.
16. Which organism would most likely be a tertiary consumer?
- A. Grass
 - B. Grasshopper
 - C. Frog
 - D. Hawk
17. Approximately what percentage of energy is transferred to the next trophic level?
- A. 1%
 - B. 10%
 - C. 50%
 - D. 100%
18. Which organism acts as a decomposer?
- A. Mushroom
 - B. Rabbit
 - C. Hawk
 - D. Grass
19. In the food chain Grass → Rabbit → Fox, the rabbit is a:
- A. Producer
 - B. Secondary Consumer
 - C. Primary Consumer
 - D. Decomposer
20. What happens to most of the energy that is not transferred?
- A. It is stored forever.
 - B. It becomes sunlight.
 - C. It is lost as heat.
 - D. It disappears completely.
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Part C: Matching: Directions: Match the term in Column A with the correct answer in Column B.

Column A

- 21. ____ Producer
- 22. ____ Primary Consumer
- 23. ____ Secondary Consumer
- 24. ____ Decomposer
- 25. ____ Food Chain
- 26. ____ Tertiary Consumer
- 27. ____ Energy Pyramid
- 28. ____ Herbivore
- 29. ____ Carnivore
- 30. ____ Sun

Column B

- A. Organism that eats only plants
 - B. Main source of energy for most ecosystems
 - C. Organism that breaks down dead organisms
 - D. Organism that eats a primary consumer
 - E. Diagram showing how much energy is available at each level
 - F. Organism that makes its own food
 - G. Sequence showing the flow of energy through organisms
 - H. Organism that eats a secondary consumer
 - I. Organism that eats only animals
 - J. Organism that eats producers
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